

Remarks/Arguments

Claims 1 and 3– 11 are pending in the application with claims 1, 4, 7 and 10 being amended and claim 2 being cancelled by this response. Support for the amendments to the claims is found in original claims 2 and 10. Thus, no new matter is added by these amendments.

Rejection of claims 1-11 under 35 U.S.C. 102(e)

Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Ye et al. (US 2006/00080000, hereinafter referred to as “Ye”)

Claim 2 has been cancelled by this response and thus the rejection of claim 2 is now moot and should be withdrawn. Applicants submit that for at least the following reasons, claims 1 and 3-11 are patentable over Ye.

The present arrangement as claimed in claim 1 provides a method of decoding a picture sequence coded with spatial and temporal scalability. The coded data includes motion information. A hierarchical temporal synthesis step carries out a motion compensated temporal filtering, or MCTF, of pictures at a frequency decomposition level of the motion information, to provide pictures at a lower decomposition level. The hierarchical temporal synthesis step includes a motion estimation step using spatial interpolation filters. During a motion compensated temporal filtering operation, the resolution chosen for the use of the motion information and the number of coefficients of the spatial interpolation filters used for the motion estimation are controlled by a motion configuration choice circuit and depend on a decoding scenario. The decoding scenario depends at least on a spatial resolution and a bit-rate selected for the decoding. The present claimed arrangement is patentable as each of the above features is neither taught nor suggested by Ye.

The independent claims have been amended to include features of dependent claims 2 and (partly) claim 10, e.g. the number of coefficients of the spatial interpolation filters is

modified, depending on the coding scenario wherein the decoding scenario depends at least on a spatial resolution and a bit-rate selected for the decoding. Further, the independent claims have been amended to clarify that the resolution chosen for the number of coefficients of the spatial interpolation filters is dependent on a decoding scenario, the decoding scenario depending at least on a spatial resolution and a bit-rate selected for the decoding. Thus, no new matter has been added.

Ye neither discloses nor suggests “the resolution chosen for the use of the motion information and the number of coefficients of the spatial interpolation filters used for the motion estimation are controlled by a motion configuration choice circuit” as in the present claimed arrangement. Ye also neither teaches nor suggests that “the decoding scenario depends at least on a spatial resolution and a bit-rate selected for the decoding” as recited in the present claimed arrangement.

Ye describes fully scalable 3-D overcomplete wavelet video coding using adaptive motion compensated temporal filtering. Ye describes a method and device for coding video where a video signal is spatially decomposed into at least two signals of different frequency sub-bands. An individualized motion compensated temporal filtering scheme is applied to each sub-band signal adaptively according to signal contents. Texture coding is applied to each of the motion compensated temporally filtered sub-band signals adaptively according to the signal content.

Although Ye teaches in para.[0034] “independently optimized interpolation filters with a different tap can be used for each subband”, this is not the same as a variation of the number of coefficients, or of the number of filter taps respectively as in the amended claims of the present arrangement. Thus, unlike the present claimed arrangement, Ye neither teaches nor suggests “the resolution chosen for the use of the motion information and the number of coefficients of the spatial interpolation filters used for the motion estimation are controlled by a motion configuration choice circuit”.

Further, Ye uses the term “subband” in para.[0034] in the context of interframe wavelet coding, and therefore Ye, contrary to the present claimed arrangement, does not refer to spatial resolution and not to a bit-rate that is selected for decoding. Thus, Ye neither teaches nor suggests “the decoding scenario depends at least on a spatial resolution and a bit-rate selected for the decoding” as recited in the present claimed arrangement.

In view of at least the foregoing, Applicants submit that claim 1 is patentable over Ye. Claim 3 is dependent on claim 1 and thus is patentable for the same reasons as claim 1.

Claim 4 provides a method of coding a picture sequence of a given spatial resolution, with spatial and temporal scalability. A hierarchical temporal analysis step carries out a motion compensated temporal filtering, or MCTF, of pictures at a frequency decomposition level, from motion information obtained by a motion estimation step performed between these pictures, to provide pictures at a higher decomposition level. During a motion compensated temporal filtering operation, the resolution chosen for the use of the motion information and the number of coefficients of the interpolation filters used depends at least upon the given spatial resolution of the source pictures. The motion estimation step includes a first motion configuration choice for determining operating conditions of the motion estimation according to different decomposition levels of pictures received from the hierarchical temporal analysis step. The hierarchical temporal analysis step includes performing a motion compensation and a second motion configuration choice for determining a configuration of the motion compensation according to the decomposition levels of the pictures or the given spatial resolution.

As discussed above with respect to claim 1, Ye neither discloses nor suggests “the resolution chosen for the use of the motion information and the number of coefficients of the interpolation filters used depends at least upon the given spatial resolution of the source pictures” as in the present claimed arrangement. Ye also neither teaches nor suggests that “a second motion configuration choice for determining a configuration of said motion compensation according to the decomposition levels of the pictures or said given spatial resolution” as recited in the present claimed arrangement.

Although Ye teaches in para.[0034] “independently optimized interpolation filters with different tap can be used for each subband”, this is not the same as a variation of the number of coefficients, or of the number of filter taps respectively as in the amended claims of the present arrangement. Thus, unlike the present claimed arrangement, Ye neither teaches nor suggests “the resolution chosen for the use of the motion information and the number of coefficients of the interpolation filters used depends at least upon the given spatial resolution of the source pictures”.

Further, Ye uses the term “subband” in para.[0034] in the context of interframe wavelet coding, and therefore Ye, contrary to the present claimed arrangement, does not refer to spatial resolution and not to a bit-rate that is selected for decoding. Thus, Ye neither teaches nor suggests “a second motion configuration choice for determining a configuration of said motion compensation according to the decomposition levels of the pictures or said given spatial resolution” as recited in the present claimed arrangement.

In view of at least the foregoing, Applicants submit that claim 4 is patentable over Ye. Claims 5, 6, 8 and 9 are dependent on claim 4 and thus is patentable for the same reasons as claim 4.

Claim 7 is an independent claim directed to a decoder including features similar to those of claim 1. It is thus respectfully submitted that claim 7 is patentable for the same reasons as claim 1 discussed above. Claims 10 and 11 depend from and inherit all the features of claim 7. Therefore, claims 10 and 11 are patentable for at least the reason that they respectively depend from claim 7, with each dependent claim containing further distinguishing features.

In view of the above remarks and amendments to claims 1, 4 and 7, it is respectfully submitted that each feature of amended claims 1, 4 and 7 are neither taught nor suggested by Ye. Thus, the current Office Action fails to make a prima facie case that the present claimed is

anticipated by Ye. Therefore, it is further respectfully submitted that this rejection has been overcome and should be withdrawn.

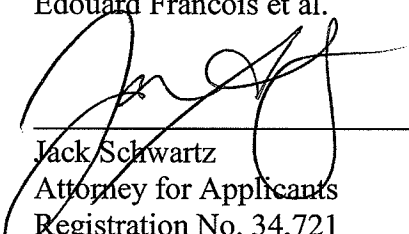
Conclusion

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicants' attorney at the telephone number listed below, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No additional fee is believed due. However, please charge any additional fee or credit any overpayment to Deposit Account 07-0832.

Respectfully submitted,
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